



**Date:** May 6, 2014

**To:** Thomas J. Bonfield, City Manager  
**Through:** Keith Chadwell, Deputy City Manager  
**From:** Mark D. Ahrendsen, Director of Transportation  
**Subject:** NCDOT Encroachment Agreement for Erwin Road Underpass Lighting Project

### **Executive Summary**

Duke University has prepared plans to install LED (light emitting diode) street lighting on Erwin Road at the NC 147 underpass to improve visibility and safety for student pedestrians, bicyclists and the general public. The improvements will be constructed within the state-maintained right-of-way by attaching the lighting system and luminaries onto the parallel overhead bridge structures. Project equipment and construction costs will be at the expense of Duke University contingent upon the City of Durham agreeing to provide the ongoing routine maintenance and operation of the system. NCDOT construction approval requires a three party right-of-way agreement, with Duke University agreeing to construct the system and the City of Durham agreeing to provide the ongoing maintenance and operations. The estimated design and construction cost to Duke University is \$90,000. The estimated annual maintenance cost to the City, including electric costs, is \$1,000.

### **Recommendation**

The administration recommends that the City Council authorize the City Manager to execute an N. C. Department of Transportation three party right of way encroachment agreement with Duke University for the Erwin Road Underpass Lighting Project.

### **Background**

Duke University desires to improve the street lighting on Erwin Road at the NC 147 underpass to improve the walkability and bicycling safety between the university's West and Central Campus to the Ninth Street business district and East Campus. Since underpass lighting requires special designs and luminaries attached to NCDOT structures, they are not typical lighting projects implemented by Duke Energy for local governments. Due to City funds not being available for the project design and installation costs, Duke University prepared the project plans to meet NCDOT and City specifications and proposes to implement the project at its cost if the City assumes the ongoing maintenance and operating costs. City maintenance and operations would begin upon final construction inspection approval. The estimated annual electric utility cost to the City is \$600. The estimated annual maintenance cost is \$400. The project has been designed to the same material specifications as the W. Chapel Hill Street and S. Roxboro Street railroad underpass LED

lighting projects implemented by and maintained by the City of Durham Department of Transportation in 2012. The project includes 24 LED luminaries.

### **Issues and Analysis**

In order for Duke University to proceed with the project, the N. C. Department of Transportation requires an encroachment agreement. The agreement requires Duke University and its contractors to be responsible for the installation of the project in accordance with the approved project plans. Upon construction completion, the City of Durham would agree to provide maintenance and cover operational costs of the system. The cost of the project to Duke University is estimated at \$90,000 and is expected to be installed within two to three months of execution of the encroachment agreement. The estimated annual cost to the City of Durham is \$1,000. The NCDOT project encroachment agreement is attached.

### **Alternatives**

The City Council may choose to authorize the City Manager to execute the NCDOT encroachment agreement in order to provide ongoing maintenance and operations for a public improvement project provided by Duke University. The City Council may also decide this is not a project worthy of the City of Durham providing ongoing maintenance and expense.

### **Financial Impact**

The estimated annual electric meter service operating cost for this project is \$600. The estimated annual routine maintenance costs for the project is \$400. These nominal costs will be covered by the Transportation Department's annual General Fund operating expense budget.

### **SDBE Summary**

Due to the nature of this item, there is no SDBE review or summary.

### **Attachments**

NCDOT Encroachment Agreement  
Construction Plans